REMARKS

Claims 73-83, 85-94 and 105-106 were examined. Applicant has amended claims _73, 74, 85, 87, 88__. No new claims have been presented. No new matter has been presented.

The relations between the modulator drive signal, modulator bias, and the optical power transmission of the Mach-Zehnder pulse modulator are described in paragraphs [0084] to [0089]. The relation between the optical power transmission of the Mach-Zehnder pulse modulator and the modulation depth of the pulse can be found in paragraphs [0218] and [0219]. The relations between bit-error-rate (BER) and Q-factor and the modulation depth of the pulse are described in paragraph [0223].

Amendment to Specification

Four sentences are to be inserted into the end of paragraph [0223] on page 18.

The last sentence of paragraph [0223] reads: "A graph similar to that of FIG. 30 may be generated based on the parameters of any given transmission system to determine the optimal pulse shape for that system and transmission distance."

Insert the following immediately after the last sentence of paragraph [0223]:

"Parameters of a transmission system ~~may~~ include ~~but not limited to~~ the transmitted laser optical power, network channel spacing, the transmission line length, the transmission line dispersion, and nonlinearities of the transmission network. The desired modulation depth of the optical pulse can be obtained by selecting the bias and the drive voltage of the pulse modulator to produce optical pulses with optimal modulation depth that mitigate non-linearities of the PSK transmission line and minimize adjacent channel crosstalk wherein the optimal modulation depth is selected according

to the following parameters of the transmission system ~~which may include but not limited to~~: the transmitted laser optical power, network channel spacing, the transmission line length, the transmission line dispersion, and nonlinearities of the transmission network. The bias of the pulse modulator can be selected, for example, using an adjustable dc voltage source applied to the pulse modulator while monitoring the Q-factor or bit-error-rate of the received optical signal. Similarly, the drive voltage of the pulse modulator can be selected, for example, using a ~~data~~ clock driver electronic amplifier with an adjustable gain applied to the pulse modulator while monitoring the Q-factor or bit-error-rate of the received optical signal."

The following technical support for the last sentence can be found in specifications (no new matter added):

The bias of the pulse modulator can be selected, for example, using an adjustable dc voltage source applied to the pulse modulator while monitoring the Q-factor (see vertical axis of Fig. 30 and description of Q-factor in [0223]) or bit-error-rate (see [0213] and vertical axis of Figs. 26 and 27) of the received optical signal. Similarly, the drive voltage of the pulse modulator can be selected, for example, using a clock driver electronic amplifier with an adjustable gain applied to the pulse modulator while monitoring the Q-factor (see vertical axis of Fig. 30 and description of Q-factor in [0223]) or bit-error-rate (see [0213] and vertical axis of Figs. 26 and 27) of the received optical signal.

CONCLUSION

It is submitted that the present application is in form for allowance, and such action is respectfully requested.

The Commissioner is authorized to charge any additional fees, which may be required.

Respectfully submitted,
Celight, Inc.

Date: 4/21/2006 By: _____
Pak Shing Cho

Date: 4/21/2006 By: _____
Vladimir Grigoryan

Date: 4/21/2006 By: _____
Nadya Reingand

Date: 4/21/2006 By: _____
Isaac Shpantzer

Date: 4/21/2006 By: _____
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